UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/815,129	LOUGHRAN ET AL.
	Examiner	Art Unit	
	Wutchung Chu	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on <u>29 November 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-26</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-26</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This communication is in response to application's amendment filed on

11/29/2007. Claims 1-26 are pending.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claim 1-5, 7-8, 11-13, 15-17, 19-20, and 23-26 is rejected under 35

U.S.C. 102(e) as being anticipated by Wybenga et al. (US2004/0223504).

Regarding claims 1, Wybenga et al. disclose Apparatus and method for

workflow-based routing in a distributed architecture router **(see paragraph 9 line**

1-4) comprising:

- at least one node interconnected through a fabric, the at least one

  node **(see paragraph 35 line 6 routing nodes)** comprising :

  o at least one of a plurality of network processing devices **(see**

     figure 2 box 230 classification processor box 240

     system processor box 250 async variables controller) for

receiving at least one of the cell and the packet information,

for determining a destination within the node for the cell and

the packet information, and for at least one of routing and

forwarding the cell and the packet information to the

destination **(see paragraph 21 line 5-15)**;

o   a shared bus structure for coupling each of the network

processing devices with each other **(see paragraph 40 line

3 PCI bus and figure 2 ref 290)**; and

o   an interface **(see figure 2 box 280 GBE which interfaces

figure 1 box 150 switch fabric)** for coupling at least one of

the network processing devices **(see figure 2 box 280 GBE

interconnects with box 230 classification processor and

box 240 system processor through 290 bus)** with the

fabric **(see paragraph 35 line 8 switch fabrics and figure

1 box 155)** to support communication between nodes **(see

paragraphs 40 and 42 line 7)**.

Regarding claim 2, Wybenga et al. teaches the destination is determined

in response to at least one of stored routing rules and characteristics of the cell

and the packet information **(see paragraph 39 line 14 classification

processor)**.

Regarding claim 3, Wybenga et al. teaches the at least one of a plurality

of network processing devices employ dynamically updated routing rules (see

paragraph 36 line 5-8).

Regarding claim 4, Wybenga et al. teaches the at least one of a plurality

of network processing devices performs the at least one of routing and

forwarding on both the cell and the packet information simultaneously (see

paragraph 46).

Regarding claim 5, Wybenga et al. teaches the at least one of a plurality

of network processing devices directly delivers the at least one of routing and

forwarding the cell and the packet information into a memory of the destination

(see paragraph 36 line 5-10).

Regarding claim 7, Wybenga et al. teaches the interface provides the cell

and the packet information to the at least one network processing device (see

paragraph 36 line 6-7).

Regarding claim 8, Wybenga et al. teaches the interface comprises at

least one of a System Interface (see figure 142 PMD module) and a

Maintenance Interface (see paragraph 41 line 8 doorbell register interface).

Regarding claim 11, Wybenga et al. teaches the node further comprises:

- a general-purpose processor (see paragraph 41 line 6 –16 and

  figure 2 box 240 system processor) for at least one of controlling

the at least two network processing devices and performing

maintenance on the node **(see paragraph 42)**.

Regarding claim 12, Wybenga et al. teaches the shared bus structure

couples the general-purpose processor with each of the network processing

devices **(see figure 2 ref 290)**.

Regarding claim 13, Wybenga et al. teaches the shared bus structure

comprises a Peripheral Component Interconnect bus **(see figure 2 ref 290 PCI**

bus and paragraph 40 line 3).

Regarding claim 15, Wybenga et al. teaches comprising: at least one

external system input/output interface **(see figure 1 box 146 IOP)**.

Regarding claim 16, Wybenga et al. teaches the external system

input/output interface supports at least one transport mechanism type, the at

least one transport mechanism type comprising at least one of Asynchronous

Transfer Mode, Internet Protocol, and Frame Relay **(see paragraph 36 line 13-**

14).

Regarding claim 17, Wybenga et al. teaches a communication node for

processing at least one of cell and packet information comprising:

- at least one of a plurality of network processing devices for

  receiving at least one of the cell and the packet information**(see**

  figure 2 box 230 classification processor box 240 system

processor box 250 async variables controller), for determining a destination within the node for the cell and the packet information, and for at least one of routing and forwarding the cell and the packet information to the destination **(see paragraph 21 line 5-15)**, the destination determined in response to at least one of stored routing rules and characteristics of the cell and the packet information **(see paragraph 39 line 14 classification processor)**;

- a shared bus structure for coupling each of the network processing devices with each other **(see paragraph 40 line 3 PCI bus and figure 2 ref 290)**; and

- at least one of a System Interface **(see figure 2 box 280 Gbe which interfaces with figure 1 box 150 switch fabric)** and a Maintenance Interface **(see paragraph 41 doorbell register interface where a doorbell interrupt is initiated when a device performs a write operation to a pre-defined Configuration Data Register. This interrupt can be enabled and disabled. Thus provide maintenance through an interface)** for coupling for providing the cell and the packet information to the at least one network processing device **(see paragraphs 41 and 42 LPC drivers use the doorbell interrupt to initiate communications between the processors)**.

Regarding claims 19-20 and 23-26, Wybenga et al. disclose all the

limitations as discussed in the rejection of claims 3-5, and 11-13, and 15 and are

therefore claims 18-21 and 23-26 are rejected using the same rationales.

· Claim Rejections - 35 USC § 103

3.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1,

148 USPQ 459 (1966), that are applied for establishing a background for

determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 3 and 18 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Wybenga et al. in view of Sundling et al. (US6785277).

Regarding claims 3 and 18, Wybenga et al. disclose all the subject

matter of the claimed invention with the exception of the at least one of a plurality

of network processing devices employ dynamically updated routing rules.

Sundling et al. from the same or similar fields of endeavor teaches the use

of cost factors change, all or some of the respective routing tables must be

modified to properly utilize this information **(see Sundling et al. column 9 line

65 to column 10 line 10).** Thus, it would have been obvious to one of ordinary

skill in the art at the time of the invention to use the cost factors change as taught

by Sundling et al. in apparatus and method for workflow-based routing in a

distributed architecture router of Wybenga et al. in order to provide update

routing transmission services.

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

7.   Claims 6,14, 21 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Wybenga et al. in view of its background.

Regarding claim 6,14, 21, Wybenga et al. disclose all the subject matter

of the claimed invention with the exception of the at least one network processing

device supports peer-to-peer routing.

Wybenga et al. background from the same or similar fields of endeavor

teaches the use of new services, such as voice-over-IP (VoIP) or streaming

applications, and the development of mobile Internet **(see Wybenga et al.**

background paragraph 2) which are forms of peer-to-peer system. Thus, it

would have been obvious to one of ordinary skill in the art at the time of the

invention to use the new services, such as voice-over-IP (VoIP) or streaming

applications, and the development of mobile Internet as taught by the

background of Wybenga et al. in apparatus and method for workflow-based

routing in a distributed architecture router of Wybenga et al. in order to provide

peer-to-peer system service and system transmission method.

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

9.   Claims 9,10, and 22 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Wybenga et al. in view of Oner (US2005/0078696).

Regarding claims 9, 10, and 22, Wybenga et al. teaches the interface

comprises at least one of a System Interface **(see figure 142 PMD module)** and

a Maintenance Interface **(see paragraph 41 line 8 doorbell register interface),**

and disclose all the subject matter of the claimed invention with the exception of

the interface comprises a multiplexer for creating a multiplexed stream from the

at least one of the cell and the packet information.

Oner from the same or similar fields of endeavor teaches the use of

address multiplexer **(see Oner paragraph 125 line 9 and figure 9 box 92**

address multiplexer). Thus, it would have been obvious to one of ordinary skill

in the art at the time of the invention to use the address multiplexer as taught by

Oner in apparatus and method for workflow-based routing in a distributed

architecture router of Wybenga et al. in order to enhance the efficiency of the system.

Response to Arguments

10.   Applicant's arguments filed 11/29/2007 have been fully considered but they are not persuasive.

11.   **With regard to applicant's remark for claim 1 (page 5),** applicant submitted that the independent routing nodes are connected by a switch which comprises a pair of high speed switch fabrics which cannot be equated to an interface for coupling the network processing devices with fabrics. However, Wybenga teaches Gbe an interface (see figure 2 box 280) which interfaces with switch fabric (see figure 150) and also interconnects with the processors (see figure 2 boxes 230, 240), and to support communication (see paragraph 40), and thus meets the limitations and rejection respectfully remains. Furthermore, although the claims are interpreted in light of specification, limitations from the specification are not read into the claims. See *In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).*

12.   **With regard to applicant's remark for claim 17 (page 5),** applicant submitted system interface and maintenance interface cannot be equated to the switch. However, Wybenga teaches Gbe (see figure 2 box 280) which interfaces with switch fabric (see figure 1 box 150) and doorbell register interface where a doorbell interrupt is initiated when a device performs a write operation to a pre-defined Configuration Data Register. This interrupt can be enabled and disabled. Thus provide maintenance through an interface (see paragraph 41 and figure 2

box 240), and LPC drivers use the doorbell interrupt to initiate communications

between the processors (see paragraphs 41 and 42) and thus meet the claimed

limitations and rejection respectfully remains. Furthermore, although the claims

are interpreted in light of specification, limitations from the specification are not

read into the claims. See *In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057*

(Fed. Cir. 1993).

Conclusion

13.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Ricciulli (US2004/0202190) discloses layer-1packet filtering.

Gulati et al. (US2004/0151170) disclose management of received data within

host device using linked lists.

Freeman (US2003/0035375) discloses method and apparatus for routing of

messages in a cycle-based system.

Dai et al. (US2004/0246961) disclose method and apparatus for transmitting

wake-up packets over a network data processing system.

Block et al. (US2005/0025122) disclose method and system for filtering inter-

node communication in a data processing system.

14.   Lu et al. (US6839345) disclose MAC/PHY interface.

15.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of

time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire

THREE MONTHS from the mailing date of this action. In the event a first reply is

filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
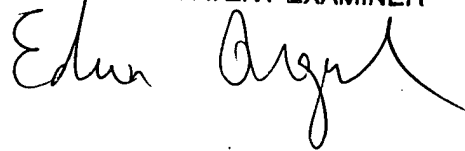
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wutchung Chu whose telephone number is 571 270 1411. The examiner can normally be reached on Monday - Friday 1000 - 1500EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan D. Orgad can be reached on 571 272 7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from

the Patent Application Information Retrieval (PAIR) system. Status information

for published applications may be obtained from either Private PAIR or Public

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/WC/
Wutchung Chu

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